

Eye Shine in Birds.— In a recent interesting and valuable article on "Nature's Transformations at Panama" (National Geographic Magazine, August, 1915, p. 176) Shiras called attention to, and gives his observations in studying, the glow seen at night in the eyes of various animals when they are facing a bright light.

The present writer is pleased to contribute to the literature of this subject an observation of his own. Not long ago, while motoring at night through a particularly dark canyon, I noticed far ahead in the illuminated road, two small glowing pink spots, which were extinguished when a bird flew from the road on the near approach of the car. The bird alighted again, some distance ahead in the road, when the pink points reappeared, and were identified as the bird's eyes; it was shot, and proved to be a Nuttall's Poorwill. This observation fits in well with those of Shiras who recorded this eye shine in Nighthawks.

It is well here to interject the question as to whether this glow in birds' eyes does come from a true *tapetum lucidum*, as is implied (or stated) by Shiras, inasmuch as Casey Wood (a highly qualified authority on comparative ophthalmology) says "The tapetum is absent in birds, although the Ostrich has a glass-like layer in the choroid of lamellated structure capable of reflecting light. This arrangement, however, is only a retino-choroidal variation, and not a true tapetum" (Am. Encyclop. Ophthalmology, Vol. IV, p. 2653).

The present writer has no desire to split hairs, but merely wishes to call attention to a point (one amongst hundreds) awaiting decision. It may be that no bird has a true tapetum, or if Caprimulgin birds have not yet been examined for this structure, it is equally possible that birds of this type *do* have a true tapetum; all this reminds one that there is plenty of material still left for original research, or to be used in corroborating or disproving earlier work.— W. H. BERGTOLD, *Denver, Colo.*

Weight and Contents of Birds' Eggs.— The following data have been collected during the past two years and are here presented as there seems to be but little recorded information on the subject. The eggs were weighed before and soon after blowing (when thoroughly dry). The latter weight of course, represents the weight of the shell and the difference between the two, the weight of the contents. The contents are also given in cubic centimeters. In some cases the actual contents were measured, in others the shell was filled with water and the water measured. With proper instruments it would be possible to determine the specific gravity of the contents of the egg. It would be interesting to learn if this would show any relation between eggs of species of the same family or order.

Only averages are given below for each set or series of eggs.

| | | Average Weight | | | | | | Cubic Contents | |
|-------------------|------------|----------------|-------|--------|--------|-------|----------|-------------------|-------|
| | | Full | | | Empty | | | | |
| | | 5 oz. | 5 dr. | 1 scr. | 2. gr. | 4 dr. | 3 scr. | | 0 gr. |
| Loon (4 eggs) | | | | | | | 147 c.c. | | |
| Common Tern | (set of 3) | 5. | 0. | 17.5 | | 1. | 3.2 | 17.5 | |
| | (set of 3) | 5. | 0. | 2.8 | | 1. | 3.2 | 17.3 | |
| | (set of 3) | 5. | 0. | 6.1 | | 1. | 3.8 | 17.7 | |
| | (set of 3) | 5. | 0. | 2.3 | | 1. | 3.5 | 17.4 | |
| Black-crowned | (set of 3) | 1. | 2. | 1. | 4. | | 2. | 15. | 26. |
| Night Heron | (set of 3) | 1. | 1. | 2. | 0. | | 2. | 9. | 24. |
| | " | 1. | 2. | 1. | 6. | | 2. | 9. | 25. |
| | " | 1. | 1. | 1. | 19. | | 2. | 9. | 24. |
| Belted Kingfisher | (set of 3) | 3. | 1. | 16. | | | 15.7 | 12.7 | |
| Kingbird | (set of 4) | 1. | 0. | 10. | | | 6. | 3.6 | |
| Bobolink | (set of 5) | | 2. | 6.7 | | | 2.5 | 2.5 | |
| Chipping Sparrow | (set of 4) | | 1. | 5.7 | | | 1.3 | 1.7 | |
| | (set of 4) | | 1. | 3.9 | | | 1.3 | 1.4 | |
| Song Sparrow | (set of 5) | | 1. | 13.5 | | | 3.65 | 1.8 | |
| | (set of 5) | | 1. | 16.5 | | | 2.35 | 2. | |
| | (set of 4) | | 1. | 11. | | | 2.5 | 1.6 | |
| English Sparrow | (set of 4) | | 2. | 1.1 | | | 3.6 | 2.5 | |
| | (set of 4) | | 2. | 4.9 | | | 4. | 2.6 | |
| | (set of 5) | | 1. | 15.3 | | | 3.6 | 2.2 | |
| | (set of 5) | | 2. | 3.3 | | | 3.5 | 2.2 | |
| Barn Swallow | (set of 5) | | 1. | 9.8 | | | 1.7 | 1.6 | |
| | (set of 4) | | 1. | 1.9 | | | 1.5 | 1.3 | |
| Bank Swallow | (set of 5) | | 1. | .2 | | | 1. | 1.04 | |
| | (set of 4) | | | 18.7 | | | 1. | 1.05 | |
| | (set of 5) | | 1. | 1.7 | | | 1. | 1.15 | |
| | (set of 6) | | | 18.9 | | | 1. | 1.02 | |
| Tree Swallow | (set of 4) | | 1. | 8. | | | 2.5 | 1.5 | |
| Cliff Swallow | (set of 3) | | 1. | 14. | | | 2.6 | 1.8 | |
| Red-eyed Vireo | (set of 3) | | 1. | 14.7 | | | 2.2 | 2. | |
| | (set of 4) | | 1. | 14. | | | 2. | 1.7 | |
| Ovenbird | (set of 4) | | 2. | 5. | | | 3. | 4. | |
| Yellow Warbler | (set of 4) | | 1. | 2.5 | | | 1.25 | 1.25 | |
| | (set of 5) | | 1. | .9 | | | 1.25 | 1.4 | |
| Redstart | (set of 4) | | 1. | 1.8 | | | .98 | 1.3 | |
| | (set of 4) | | 1. | 2.7 | | | 1. | 1.6 | |
| Catbird | (set of 4) | | 1. | 8.8 | | | 3.9 | 3.2 | |
| | | | 2. | 4. | | | 3.3 | 3.4 | |
| Veery | (set of 4) | | 2. | 6. | | | 3. | 2.4 | |
| Robin | (set of 4) | | 1. | 7.1 | | | 4.8 | 5.3 | |

— LT. G. RALPH MEYER, *Fort McKinley, Me.*